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FORT COLLINS, CO 80527-2400

EXAMINER

TRUONG, THANHNGA B

ART UNIT

PAPER NUMBER

2135

NOTIFICATION DATE

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

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### **DETAILED ACTION**

1. This action is responsive to the communication filed on September 6, 2007. Claims 1-15 and 27-30 are pending. At this time, claims 1-15 and 27-30 are rejected.

### ***Response to Argument***

2. Applicant's arguments filed February 21, 2008 have been fully considered but they are not persuasive.

Applicant argued that:

"Mihm does not disclose and/or teach each element of claim 27, and therefore cannot anticipate the claim."

Examiner respectfully disagrees with the applicant and still maintain that:

Mihm does teach the claimed subject matter. As a matter of fact, Mihm clearly discloses that the an encrypted unique identification number (EUID) 162 is stored on the rewriteable non-volatile memory 160. The EUID 162 is formed by encrypting the UID 152, for example with a master encryption key (see paragraph [0034] of Mihm). It is a common standard process of one skill in the art that a memory, such as rewriteable non-volatile memory 160, always has to perform a read and write operation in order to store and retrieve data (e.g, keys, master key, encryption key, or program) from this such memory. Besides, Figure 1 of the instant application shows the Master key memory 46, wherein said master key memory 46 is a flash memory, which is also a rewriteable non-volatile memory (see page 5, lines 30-31 of the specification). Furthermore, Figure 12, step 184 of the instant application shows that the encrypted keys is written to the second non-volatile memory and not the random access memory as stated in claim 27. Therefore, the limitation that cited "write the encrypted encryption keys to a random access memory" in claim 27 did not even support by the instant specification and could construe new matter.

Applicant further argued that:

The combination of Mihm and Fujita fails to disclose or even suggest each element of at least independent claims 1 and 28, thus failing to establish prima facie obviousness.

Examiner respectfully disagrees with the applicant and still maintain that:

Mihm does teach the claimed subject matter. As mentioned above, Mihm clearly discloses that the an encrypted unique identification number (EUID) 162 is stored on the rewriteable non-volatile memory 160. The EUID 162 is formed by encrypting the UID 152, for example with a master encryption key (see paragraph [0034] of Mihm). It is a common standard process of one skill in the art that a memory, such as rewriteable non-volatile memory 160, always has to perform a read and write operation in order to store and retrieve data (e.g, keys, master key, encryption key, or program) from this such memory. Besides, Figure 1 of the instant application shows the Master key memory 46, wherein said master key memory 46 is a flash memory, which is also a rewriteable non-volatile memory (see page 5, lines 30-31 of the specification). Although Mihm teaches storage device as shown in paragraph 0034, Mihm is silent on the capability of showing the storage device is a magnetic memory. On the other hand, Fujita teaches a magnetic memory as shown in element 11 of Figure 1 and column 3, line 64 through column 4, line 6 of Fujita. Thus, the combination of teaching between Mihm and Fujita is proper.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, from the explanation above, the combination of teaching between Mihm and Fujita is efficient and proper.

Mihm and Fujita do not need to disclose anything over and above the invention as claimed in order to render it unpatentable or anticipate. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claimed limitations.

The fact that Examiner may not have specifically responded to any particular arguments made by Applicant and Applicant's Representative, should not be construed as indicating Examiner's agreement therewith.

For the above reasons, it is believed that the rejections should be sustained.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claim 27 are rejected under 35 U.S.C. 102(e) as being anticipated by Mihm et al (US 2003/0236983 A1).

a. Referring to claim 27:

i. Mihm teaches a method of encrypting encryption keys using a master encryption key in an information storage device, comprising:

(1) providing the encryption keys to the information storage device; reading a master encryption key from a non-volatile memory (**paragraph 0034 of Mihm**); and

Art Unit: 2135

(2) encrypting each one of the encryption keys using the master encryption key; and writing (e. g., storing) the encrypted encryption keys to a random access memory (**paragraphs 0034-0035 and claims 7 and 13 of Mihm**).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-15, and 28-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mihm et al (US 2003/0236983 A1), and further in view of Fujita (US 6,947,318 B1).

a. Referring to claim 1:

i. Mihm teaches a removable information storage device suitable for use with a host, comprising:

(1) a non-volatile memory configured to store a master encryption key (**paragraph 0034 of Mihm**); and

(2) a non-volatile magnetic memory configured to store encryption keys which have been encrypted using the master encryption key and to store data which has been encrypted using the encryption keys (**paragraph 0034 and claims 7 and 13 of Mihm**).

ii. Although Mihm teaches storage device as shown in paragraph 0034, Mihm is silent on the capability of showing the storage device is a magnetic memory. On the other hand, Fujita teaches a magnetic memory as shown in element 11 of Figure 1 and column 3, line 64 through column 4, line 6 of Fujita.

iii. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to:

(1) have modified the invention of Mihm with the teaching of Fujita to use a magneto-resistive effect element as a storage element (**column 1, lines 15-16 of Fujita**).

iv. The ordinary skilled person would have been motivated to:

(1) have modified the invention of Mihm with the teaching of Fujita to store data in a non-volatile manner by utilizing a magneto-resistive effect have been frequently carried out. One of characteristics of the magnetic random access memory lies in that realization of a finer element and higher integration is possible (**column 1, lines 19-23 of Fujita**).

b. Referring to claim 2:

i. Mihm further teaches:

(1) an encryption and decryption engine configured to encrypt and decrypt the encryption keys using the master encryption key and to encrypt and decrypt the data using one or more of the encryption keys (**paragraphs 0035-0037 of Mihm**).

c. Referring to claim 3:

i. The combination of teaching between Mihm and Fujita teaches a removable information storage device suitable for use with a host. Fujita further teaches:

(1) wherein the first non-volatile memory is a magnetic memory (**see element 11 of Figure 1 and column 3, line 64 through column 4, line 6 of Fujita**).

d. Referring to claim 4:

i. The combination of teaching between Mihm and Fujita teaches a removable information storage device suitable for use with a host. Mihm and Fujita further teaches:

(1) wherein the first non-volatile memory is a read-only memory (**see element 150 of Figure 1 of Mihm**) which includes fuse elements (**column 1, lines 43-49 of Fujita**).

e. Referring to claim 5:

i. Mihm further teaches:

(1) wherein the first non-volatile memory is a nitrided read-only memory (**see element 150 of Figure 1 and paragraph 0030 of Mihm**).

f. Referring to claim 6:

i. Mihm further teaches:

(1) wherein the first non-volatile memory is an erasable programmable read-only memory (**see element 160, which is similar to EPROM, of Figure 1 and paragraph 0030 of Mihm**).

g. Referring to claim 7:

i. Mihm further teaches:

(1) wherein the first non-volatile memory is an electronically erasable programmable read-only memory (**see element 160, which is similar to EPROM, of Figure 1 and paragraph 0030 of Mihm**).

h. Referring to claim 8:

i. Mihm further teaches:

(1) wherein the first non-volatile memory is a flash erasable programmable read-only memory (**see element 160 of Figure 1 and paragraph 0030 of Mihm**).

i. Referring to claim 9:

i. Mihm further teaches:

(1) wherein the first non-volatile memory is a one time programmable read-only memory (**see element 160, which is similar to EPROM, of Figure 1 and paragraph 0030 of Mihm**).

j. Referring to claim 10:

i. The combination of teaching between Mihm and Fujita teaches a removable information storage device suitable for use with a host. Fujita further teaches:



(1) wherein the non-volatile magnetic memory is a magnetic random access memory (**see element 11 of Figure 1 and column 3, line 64 through column 4, line 6 of Fujita**).

k. Referring to claim 11:

i. The combination of teaching between Mihm and Fujita teaches a removable information storage device suitable for use with a host. Mihm and Fujita further teaches:

(1) wherein the second non-volatile memory is partitioned into first and second areas, and wherein the encrypted encryption keys are stored in the first areas and the encrypted data is stored in the second areas (**see Figure 1, element 150 of Mihm and column 10, lines 23-27 of Fujita**).

l. Referring to claims 12-13:

i. These claims have limitations that is similar to those of claim 11, thus they are rejected with the same rationale applied against claim 11 above.

c. Referring to claim 14:

i. The combination of teaching between Mihm and Fujita teaches a removable information storage device suitable for use with a host. Mihm and Fujita further teaches:

(1) wherein the first areas are located at one or more predetermined address locations within the second non-volatile memory (**see Figure 1, element 152 (UID) and paragraph 0034 of Mihm; column 3, line 29 of Fujita**).

d. Referring to claim 15:

i. The combination of teaching between Mihm and Fujita teaches a removable information storage device suitable for use with a host. Mihm and Fujita further teaches:

(1) wherein the first areas are located at one or more random address locations within the second non-volatile memory (**see Figure 1, element 152 (UID) and paragraph 0034 of Mihm column 3, line 29 of Fujita**).

e. Referring to claim 28:

i. Mihm further teaches a method of decrypting encryption key in an information storage device comprising:

(1) reading the encrypted encryption keys from the magnetic random access memory; reading a master encryption key from a first non-volatile memory; and decrypting each one of the encryption keys using the master encryption key (**paragraphs 0034-0035 and claims 7 and 13 of Mihm**).

ii. Although Mihm teaches storage device as shown in paragraph 0034, Mihm is silent on the capability of showing the storage device is a magnetic memory or magnetic random access memory. On the other hand, Fujita teaches a magnetic memory or magnetic random access memory as shown in element 11 of Figure 1 and column 3, line 64 through column 4, line 6 of Fujita.

iii. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to:

(1) have modified the invention of Mihm with the teaching of Fujita to use a magneto-resistive effect element as a storage element (**column 1, lines 15-16 of Fujita**).

iv. The ordinary skilled person would have been motivated to:

(1) have modified the invention of Mihm with the teaching of Fujita to store data in a non-volatile manner by utilizing a magneto-resistive effect have been frequently carried out. One of characteristics of the magnetic random access memory lies in that realization of a finer element and higher integration is possible (**column 1, lines 19-23 of Fujita**).

f. Referring to claims 29-30:

i. These claims have limitations that is similar to those of claim 28, thus they are rejected with the same rationale applied against claim 28 above.

### **Conclusion**

7. Accordingly, THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanhnga (Tanya) Truong whose telephone number is 571-272-3858.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Vu can be reached at 571-272-3859. The fax and phone numbers for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2100.

/Thanhnga B. Truong/

Primary Examiner, Art Unit 2135

TBT

June 06, 2008

Application/Control Number: 10/689,157  
Art Unit: 2135

Page 11